

DESCRIPTION OF THE MALE OF *TROGIUM EVANSORUM*
SMITHERS (PSOCOPTERA: TROGIIDAE) FROM NORFOLK
ISLAND, WITH A KEY TO THE SPECIES OF THE GENUS

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Abstract

The male of *Trogium evansorum* Smithers is described from Norfolk Island and a key is provided to six of the seven species placed in the genus *Trogium* Illiger.

Introduction

Trogium evansorum Smithers was described on female material from Norfolk Island (Smithers 1994). The flattened body and legs and the strongly prognathous head are unusual for a species of *Trogium* Illiger. It is an almost colourless species. The type specimen was taken from the crown of a "Kentia" Palm, *Howea forsteriana* (C. Moore & F. Muell.) Becc. This palm is endemic to Lord Howe Island but is widely cultivated as an ornamental and has been introduced to Norfolk Island, where it is grown in large numbers as a source of seed for the world horticultural trade. *T. evansorum* has not yet been recorded from Lord Howe Island nor collected from *Rhopalostylis baueri* H. Wendl. & Drude var. *baueri*, the endemic palm of Norfolk Island. Its unusual features are possibly adaptations to a habitat such as the confines of a palm crown.

The first male of *T. evansorum* was collected recently indoors on Norfolk Island and is described here.

***Trogium evansorum* Smithers**

(Figs 1-3)

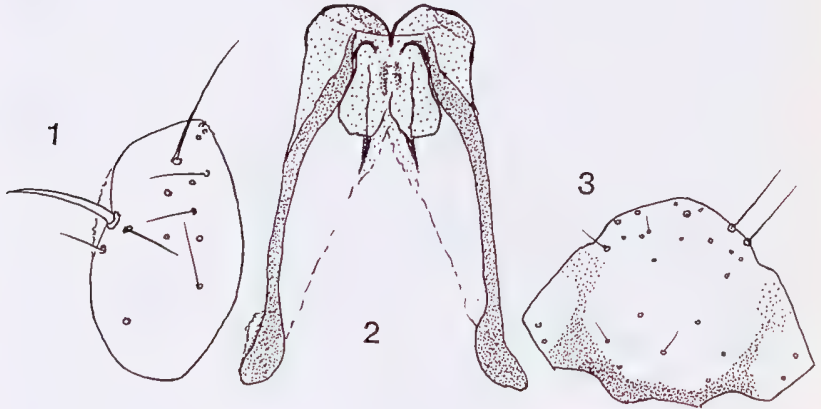
Material examined. NORFOLK ISLAND: 1 ♂, in building, Colonial Hotel, 17.i.1998, J.V. Peters (in Australian Museum, Sydney).

Description of male. Very similar to female in general form and appearance.

Coloration (in alcohol). As in female but with faint reddish lateral line from antenna base through compound eye to back of head. (Female type specimen did not have this line but may have lost it during storage in alcohol.)

Morphology. Length of body: 2.2 mm. General morphology as in female. Prothorax very short, notum in form of strongly raised, transverse ridge lying between back of head and mesonotum (similar in female, not mentioned in original description). Scape and pedicel of antenna much broader than flagellar segments. Length of flagellar segments: f1: 0.07 mm.; f2: 0.07 mm.; f3: 0.08 mm.; f4: 0.07 mm.; f5: 0.1 mm. Measurements of hind leg: F: 0.34 mm.; T: 0.54 mm.; t1: 0.2 mm.; t2: 0.05 mm.; t3: 0.05 mm.; rt: 4:1:1. No ctenidiobothria. Hind tibia with two apical spurs, without preapical spurs but with some setae on outer surface much longer than other setae. Femora broad and flattened as in female. Fore wings as in female, similarly setose.

Epiproct with rounded hind margin, sparsely setose, two setae much more conspicuous than the others. Paraproct (Fig. 1) simple, lightly sclerotized, sparsely setose, posterior spine longer than in female. One exceptionally long, fine seta, longer than the posterior spine, arises near the dorsal margin of the paraproct. No setae with "rosette" bases. Hypandrium (Fig. 3) simple, rounded behind, sparsely setose. Phallosome (Fig. 2) with well developed, divergent, sclerotized bars expanded at anterior end, not connected to each other so that the phallic frame is open anteriorly, as usual in the genus. Median distal structures of characteristic form, bulbous, membranous, with a short, anteriorly pointed, sclerotized rodlet arising from the bulbous structures on each side of midline.



Figs. 1-3. *Trogiium evansorum* Smithers, male. (1) Paraproct; (2) Phallosome; (3) Hypandrium.

Discussion

The remarkable degree to which the body and head are dorsoventrally flattened and the resultant strongly prognathous form of the head, a clearly apomorphic feature, sets *T. evansorum* apart from other members of the genus. It is possible that a new genus will be needed to accommodate this species but it is preferable to delay definition of such until both sexes of the other species of the genus are better known and a more detailed study of their morphology has been made.

Trogiium is itself an ill-defined genus of seven species, needing revision. The species are: *T. apterum* Broadhead & Richards (Kenya), *T. braheicola* García Aldrete (Mexico), *T. evansorum* Smithers (Norfolk Island), *T. lapidarius* (Badonnel) (Angola), *T. picticeps* Badonnel (Madagascar), *T. pulsatorium* (Linnaeus) (cosmopolitan) and *T. stellatum* (Badonnel) (Angola). The

following is a simple key to the species, using mainly easily observed external features, such as colour pattern. The key does not include *T. stellatum*, which was described on incomplete material and cannot be confidently placed until fresh material is available. A possible eighth species, *T. nigrum* Smithers (from Lord Howe Island) is probably more appropriately placed in the Psoquillidae (Mockford, in litt.) and is also omitted from this key.

Key to the species of *Trogium*

- 1 Apterous 2
 - Brachypterous 3
- 2 Uniformly pale colour *apterum*
 - Front of head with bold pattern *picticeps*
- 3 No pattern on abdomen *evansorum*
 - Some pattern on abdomen 4
- 4 Five transverse slender bands on abdomen *braheicola*
 - Abdominal pattern made up mainly of small areas of colour 5
- 5 Head with dark band on head *pulsatorium*
 - Head without median dark band on head *lapidarius*

Acknowledgments

I would like to thank John Peters for collecting this and other Psocoptera on Norfolk Island and the Australian National Parks and Wildlife Service for permission to work in areas under its control on Norfolk and Philip Islands.

Reference

SMITHERS, C.N. 1994. *Trogium evansorum* sp. n. (Psocoptera: Trogiidae) a remarkable, prognathous species from Norfolk Island. *Australian Entomologist* 21(4): 153-155, 10 figs.